33706

On the stability ... S/167/62/000/001/003/004
D299/D304

where $\mu = 1/\lambda$; $|\mu|_{max}$ is found by the method of iteration (given in the references). As an example, illustrating the above theoretical considerations, a freely hinged rectangular plate is analyzed. Various mesh sizes are taken, and the obtained equations solved. Thus, with mesh size $n_1 = n_2 = n_4$, one obtains a system of equations with 4 unknowns. This system was solved (by the method of iteration) at the Computation Center of the Academy of Sciences of the Ukrainian SSR, on the fast electronic computer "Kiyev". The results of the computations are shown in figures and tables. It was found that the accuracy in determining K_{cr} increases with mesh density. This was also confirmed by other investigators. The connection was established between the maximum and minimum values of K_{cr} and the parameters related to the form of the plate and the loading. The boundaries were determined of the regions of parameter variation, inside which the plate remains stable. It is noted that the values listed in the tables are the result of numerical

Card 4/5

On the stability ...

33706
S/167/62/000/001/003/004
D299/D304

calculations and are not based on the study of the general properties of K_{cr} as a function of the above-mentioned parameters. There are 6 figures, 7 tables and 8 references: 7 Soviet-bloc and 1 non-Soviet-bloc (in translation).

ASSOCIATION: Institut mekhaniki AN UzSSR (Institute of Mechanics of the AS Uzbekskaya SSR)

SUBMITTED: October 25, 1961

X

Card 5/5

BARATOV, A.

Stability of rectangular plates. Izv.AN Uz.SSR.Ser.tekh.nauk 6
no.1:38-50 '62. (MIRA 15:2)

1. Institut mekhaniki AN UzSSR.
(Elastic plates and shells)

BARATOV, A.

Stability of elastic fastened rectangular plates under the action of combined loads. Izv.AN Uz.SSR. Ser.tekh.nauk no.4:57-69 '62. (MIRA 15:7)

1. Institut mekhaniki AN UzSSR.
(Elastic plates and shells)

[illegible]

S/044/63/000/001/030/053
A060/A000

AUTHOR: Baratov, A.

TITLE: On boundary conditions in the stability analysis of elastic rectangular plates by the method of finite differences

PERIODICAL: Referativnyy zhurnal, Matematika, no. 1, 1963, 5 - 6, abstract 1V12 (Dokl. AN UzSSR, 1962, no. 6, 11 - 15; summary in Uzbek)

TEXT: Various approximate formulae are cited for finding the values of functions of non-contour points in terms of unknown functions of contour and non-contour points of the plates. For this, in the neighborhood of the point m located on the edge of the elastic plate, the function W (x) is expanded in a Taylor series

$$W_{m+1} = W_m + \frac{h_x}{1!} \left(\frac{dW}{dx} \right)_m + \frac{h_x^2}{2!} \left(\frac{d^2W}{dx^2} \right)_m + \dots$$

The notation $x = a \xi$, $W(x) = \zeta(\xi)$ is introduced, where a is a linear dimension, ξ is a dimensionless coordinate, ζ is a dimensionless function. Then the

Card 1/3

S/044/63/000/001/030/053
A060/A000

On boundary conditions in the stability analysis ....

Taylor series in dimensionless form will have the form

$$\zeta_{m+1} = \zeta_m + \frac{h_\xi}{1!}\left(\frac{d\zeta}{d\xi}\right)_m + \frac{h_\xi^2}{2!}\left(\frac{d^2\zeta}{d\xi^2}\right)_m + \dots,$$

where $h_\xi = \frac{h_x}{a}$ is a dimensionless quantity. Then the derivatives are approximated by the finite differences

$$\left(\frac{d\zeta}{d\xi}\right)_m \approx \frac{\zeta_{m+1} - \zeta_{m-1}}{2h_\xi}, \qquad \left(\frac{d^2\zeta}{d\xi^2}\right)_m \approx \frac{\zeta_{m+1} - 2\zeta_m + \zeta_{m-1}}{h^2_\xi}.$$

Various cases of plate fastening are considered: 1) the plate edges rigidly fixed. In that case

$$\zeta_m = 0, \qquad \left(\frac{d\zeta}{d\xi}\right)_m = 0;$$

2) the plate edges freely supported. In that case

$$\zeta_m = 0, \quad (M_\xi)_m = 0 \quad \text{or} \quad \left(\frac{d^2\zeta}{d\xi^2}\right)_m = 0.$$

On boundary conditions in the stability analysis S/044/63/000/001/030/053
A060/A000

By retaining a different number of terms in the Taylor series, the author obtains different formulae for the determination of ξ_{m+1}. By replacing a with b and ξ with η, the author demonstrates that the formulae obtained are valid also for the direction η (a and b being the dimensions of the plate). By increasing the number of retained terms in the Taylor series, the precision of the unknown functions being solved increases in the direction of the precision of the problems of mechanics under investigation. Expressions are cited for bending moments, total reactions, and torques for point 1 (the corner point of the plate) in dimensionless form, in terms of finite differences for the case when the plate edge is free.

P.P. Vasil'yev

[Abstracter's note: Complete translation]

Card 3/3

S/166/62/000/006/002/016
B112/B186

AUTHOR: Baratov, A.

TITLE: Investigation into the stability of elastic freely supported rectangular slabs by the method of finite differences

PERIODICAL: Akademiya nauk Uzbekskoy SSR. Izvestiya. Seriya fiziko-matematicheskikh nauk, no. 6, 1962, 17-26

TEXT: The difference equation of stability

$$2\left[(3\lambda^4+4\lambda^2+3)-(\beta\lambda^2+1)k\right]\zeta_i-\left[4(\lambda^2+1)-k\right](\zeta_k+\zeta_l)-$$
$$-\lambda^2\left[4(\lambda^2+1)-\beta k\right](\zeta_m+\zeta_n)+2\lambda^2(\zeta_o+\zeta_p+\zeta_q+\zeta_r)+$$
$$+(\zeta_s+\zeta_t)+\lambda^4(\zeta_u+\zeta_v)=0$$

which is referred to dimensionless coordinates, and the boundary conditions

Card 1/2

Investigation into the stability of ... S/166/62/000/006/002/016
B112/B186

$$\xi_{m+1} = -\xi_{m-1}, \qquad (a)$$

$$\xi_{m+1} = -0.5\,\xi_{m-2} \qquad (b)$$

form the basis of the investigation. For the parameters β and λ, intervals of stability are determined by means of numerical computations. A number of equations were solved with the aid of the high-speed computer "Kiyev" at the Institut kibernetiki AN USSR (Institute of Cybernetics AS UkrSSR). Each of these intervals depends on the critical values of the parameter k. There are 3 figures and 2 tables.

ASSOCIATION: Institut mekhaniki AN UzSSR
(Institute of Mechanics AS UzSSR)

SUBMITTED: January 25, 1962

Card 2/2

BARATOV, A.

Use of the method of finite differences in studying the stability of freely supported elastic rectangular plates. Izv. AN Uz. SSR. Ser. fiz.-mat. nauk 6 no.6:17-26 '62. (MIRA 16:2)

1. Institut mekhaniki AN UzSSR.
(Elastic plates and shells)

BARATOV, A., kand.tekhn.nauk

Universal indicating instrument. Pozh. delo 7 no.7:10 Jl '61.
(MIRA 16:11)

[illegible], [illegible]

[illegible], [illegible]: "Investigation of the effect of [illegible] character of [illegible] on the [illegible] point of [illegible] mixtures". Moscow, [illegible]. Min Higher Education [illegible] Moscow Order of Lenin Chemicotechnological Inst imeni D. I. Mendeleyev. (Dissertation for the Degree of Candidate of [illegible] Sciences)

SO: Knizhnaya letopis' No. 51, 17 December [illegible]

[illegible] A.N.

TAUBKIN, S., kand. tekhn. nauk; BARATOV, A., kand. tekhn. nauk.

Investigating the causes of a mill fire. Pozh. delo 4 no.2:15-16 F '58. (MIRA 11:1)

(Flour mills--Fires and fire prevention)

5(1) SOV/80-32-5-40/52

AUTHOR: Baratov, A.N.

TITLE: On the Possibility of Applying the Gas-Analyzer PGF-2 as a Universal Device for High-Speed Evaluation of the Explosiveness of Various Vapor-Gas-Air Media

PERIODICAL: Zhurnal prikladnoy khimii, 1959, Vol 32, Nr 5, pp 1157-1159 (USSR)

ABSTRACT: The determination of the explosive danger of various gaseous mixtures by means of gas analyzers is difficult. Their use is limited to the substances for which they are calibrated. The explosive danger cannot be determined directly, but only after comparing the measured data with the lower limit of explosive danger of the various substances, etc. The gas analyzers burn a small sample of the mixture in a chamber. The combustion heat changes the emf of a galvanometer which is proportional to the content of the inflammable component in the mixture. It is stated by the author that the burning temperature of all gases at the lower limit of explosion danger is nearly the same. This is explained by the equilibrium between the heat produced by the exothermic oxidation process and the losses of heat from the reaction zone. It is recommended to equip the galvanometer scale with a mark corresponding to 50% of the

Card 1/2

SOV/80-32-5-40/52

On the Possibility of Applying the Gas-Analyzer PGF-2 as a Universal Device for High-Speed Evaluation of the Explosiveness of Various Vapor-Gas-Air Media

value of the lower concentration limit of the gaseous mixture. The analyzer will show at once, whether the dangerous concentration is reached or not.

There is 1 graph.

ASSOCIATION: Tsentral'nyy nauchno-issledovatel'skiy institut protivopozharnoy oborony (Central Scientific Research Institute of Fire-Fighting)

SUBMITTED: March 3, 1958

Card 2/2

5 (4), 11 (2)

AUTHOR: Baratov, A. N. SOV/76-33-6-3/44

TITLE: On the Question of the Effect of the Initial Temperature on the Concentration Limits of Inflammation of Combustible Gaseous Mixtures (K voprosu o vliyanii nachal'noy temperatury na kontsentratsionnyye predely vosplameneniya goryuchikh gazovykh smesey)

PERIODICAL: Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 6, pp 1184-1188 (USSR)

ABSTRACT: The pre-heating of a combustible gaseous mixture enlarges its inflammation range. Therefore it is of theoretical and practical interest to find quantitative rules between the inflammation limit (IL) and the initial temperature (IT). Referring to this already some investigations were carried out (Refs 1-7) and a linear law discovered. Since all hitherto existing experiments do not refer to the range of lower temperatures, in the present case also this range was tested. Following compounds as gas mixtures with air were investigated: methane, ethane, methanol, ethanol, methyl formate, ethyl formate, methyl acetate and ethyl acetate. The test results obtained are represented graphically (Figs 1, 2) and show that the increase

Card 1/2

On the Question of the Effect of the Initial Temperature on the Concentration Limits of Inflammation of Combustible Gaseous Mixtures SOV/76-33-6-3/44

of the temperature effects an enlargement of the inflammation range whereby the upper limit is influenced stronger than the lower (Table). Thus an increase in temperature by 100° effects a decreasing of the lower (IL) for 8-10 % and an increase in the upper (IL) by 12-16 %. It was noticed that the above mentioned linear law is invalid for negative temperatures, and that at these temperatures a more complicated function is competent, the deviation of which from the linearity increases with the decrease of the temperature. A mathematical handling of the function between the (IL) and the (IT) at negative temperatures shows that this is a hyperbolic function and can be represented by a corresponding equation (4). There are 2 figures, 1 table, and 13 references, 6 of which are Soviet.

ASSOCIATION: Tsentral'nyy nauchno-issledovatel'skiy institut protivopozharnoy/oborony (Central Scientific Research Institute for Fire Protection)

SUBMITTED: January 3, 1958

Card 2/2

83690

S/076/60/034/008/001/014
B015/B054

11.1210
11.7100

AUTHORS: Solov'yev, N. V. and Baratov, A. N. (Moscow)

TITLE: Dependence of the Lower Concentration Limits of the Ignition of Gas - Air Mixtures on the Molecular Structure of the Combustible Component

PERIODICAL: Zhurnal fizicheskoy khimii, 1960, Vol. 34, No. 8 pp. 1661-1670

TEXT: On the basis of the thermodynamic theory by N. N. Semenov (Ref. 5), the authors show by the example of alkanes (Table 1) that there is a quantitative relationship between the lower concentration limits of ignition and the content of carbon atoms in the molecule of the fuel The theoretical results were experimentally confirmed by means of an apparatus (with an ИВ-50 (IV-50) inductor) for determining the ignition point (Fig. 1) of normal alkanes, normal and isoalcohols, as well as their formates and acetates (Table 2). An analysis of the curves obtained shows (Fig. 3) that the lower concentration limit decreases

Card 1/2

83690

Dependence of the Lower Concentration Limits of the Ignition of Gas - Air Mixtures on the Molecular Structure of the Combustible Component

S/076/60/034/008/001/014
B015/B054

monotonically (according to a hyperbolic law) with an increase in the number of carbon atoms in the fuel molecule (Table 3, corresponding coefficients). By use of M. Kh. Karapet'yants's comparative method of calculating a property of various substances (Refs. 17 and 18), it is shown that the above-mentioned relationship holds for all homologous series investigated (Table 4). By use of the last-mentioned method, the data given may serve for calculating the ignition points of many substances. The values, partly obtained for the first time for the ignition points of hydrocarbons and their oxy-derivatives show that the ignition range of substances of ramified structure is smaller than that of similar substances of normal structure. This does, however, not imply that the inflammability of organic liquids decreases with structural ramification. The authors mention a paper by B. F. Vymorokov (Ref. 2). There are 6 figures, 4 tables, and 18 references: 7 Soviet, 8 US, 2 British, and 1 French.

SUBMITTED: August 30, 1956

Card 2/2

TAUBKIN, Solomon Isaakovich; BARATOV, Anatoliy Nikolayevich;
NIKITINA, Nina Sergeyevna; SOLOV'YEV, N.V., red.;
CHEKRYZHOV, V.A., red. izd-va; PYRKINA, N.F., tekhn. red.

[Handbook on the fire hazards of solid substances and materials]Spravochnik pozharoopasnosti tverdykh veshchestv i materialov. Moskva, Izd-vo M-va kommun.khoz. RSFSR, 1961. 146 p. (MIRA 15:8)
(Fire prevention) (Inflammable materials)

BIRYUKOV, Vladimir Vasil'yevich; KUZNETSOV, P.G., ved. red.;
BARATOV, A.N., kand. tekhn. nauk, red.; TKACHENKO, L.K.,
tekhn. red.

[Brigade-type piling cranes and special-purpose piling devices in storerooms of industrial enterprises; survey of foreign equipment] Krany-shtabelery mostovogo tipa i spetsial'nye shtabeliruiushchie ustroistva na skladakh promyshlennykh predpriiatii; obzor zarubezhnoi tekhniki. Moskva, GOSINTI, 1962. 20 p. (Tema 8) (MIRA 17:4)

PLATOV, Yuriy Mikhaylovich; BARATOV, A.N., red.; KANIN, Yu., ved. red.

[New developments in the application of metals and alloys in industry; review of foreign techniques] Novoe v primenenii metallov i splavov v promyshlennosti; obzor zarubezhnoi tekhniki. Moskva, GOSINTI, 1962. 78 p. (MIRA 17:7)

37850

S/080/62/035/005/012/015
D244/D307

AUTHOR: Saratov, A. N.

TITLE: Experimental confirmation of the possibility of employing a ПГФ (PGF) type gas-analyzer as a universal indicator of explosion dangers of gas-air media

PERIODICAL: Zhurnal prikladnoy khimii, v. 35, no. 5, 1962, 1138-1141

TEXT: The PGF apparatus was used to analyze gas mixtures containing H_2, ethylene, gas from Saratov, benzine Б-70 (B-70) and 1:1 H_2-ethylene and 1:1 H_2-methane mixtures, as combustible components. Concentrations of the components were 5, 10, 20, 40 and 60% of the lower explosive concentration limit. The limiting concentration was determined in a vertical molybdenum glass cylinder fitted with a sealed-in platinum spiral which could be electrically heated to 1000 - 1100°C. A tube with a stopcock joined the cylinder to a manometer and the surrounding air. The gaseous mixtures were in-

Card 1/2

troduced into the cylinder evacuated to 10 - 20 mm Hg. It was shown that for all the mixtures investigated the indications of the apparatus are constant of the concentrations of the combustible components in the mixtures constitute the same proportion of the lower limit of the explosive concentration range. The maximum scatter of results was 10 - 15% of the mean values. The least amount of scatter was obtained for the mixture containing hydrogen which was therefore recommended for use as a standard component for calibration purposes. There are 3 figures.

BARATOV, A.N., kand.tekhn.nauk

Apparatus for determining the explosion hazard of gas-air media. Zhur. VKHO 7 no.6:672-677 '62. (MIRA 15:12)
(Gases--Analysis)
(Chemical industries--Safety measures)

L 53772-65 EWT(m)/EPF(c)/EPR/EWP(j)/T/EWA(c) Pc-4/Pr-4/Ps-4 RPL WW/WE/RM

ACCESSION NR: AP5014160

UR/0080/65/038/005/1068/1072
547.22+543.876

34
30
B

AUTHOR: Baratov, A. N.; Kucher, V. M.

TITLE: Study of the explosiveness of halogenated hydrocarbons

SOURCE: Zhurnal prikladnoy khimii, v. 38, no. 5, 1965, 1068-1072

TOPIC TAGS: explosion limit, halogenated hydrocarbon, explosive gas

ABSTRACT: Explosion limits and flammability for several C_1-C_3 saturated and unsaturated halogenated hydrocarbons were measured on a test unit constructed according to U. S. accepted standards [H. F. Howard and G. W. Jones, *Bl. Bureau of Mines*, Washington, Nr. 503, 1952]. Explosion limits for hydrogen pentane, hexane, benzene, and diethylether determined with this test unit showed an excellent agreement with the data in the literature for these compounds. In general, substitution of hydrogen atoms of a hydrocarbon with halogen atoms increases both the lower and upper explosion limits. Exceptions are fluorovinylidene and trifluoroethylene for which upper explosion limits are lower than for ethylene, and 1,1,1-trifluoropropylene for which the explosion limits are slightly greater than for propylene. The

Card 1/2

L 53772-65

ACCESSION NR: AP5014160

4

lower explosion limit increases proportionally to the number of halogen-substituted hydrogen atoms in a hydrocarbon. Contraction of the explosion limits is greater in the case of substitution with chlorine than with fluorine atoms. Except for trifluorochloroethylene a complete substitution of hydrogen with halogen atoms results in complete nonflammability. Among the investigated compounds the greatest explosiveness was exhibited by vinylidene fluoride and 1,1,1-trifluoropropylene. "The authors express their appreciation to A. G. Oshuyev and his coworkers for supplying the Freon samples used in this study." Orig. art. has: 2 tables and 2 figures.

ASSOCIATION: Tsentral'nyy nauchno-issledovatel'skiy institut protivopozharnoy oborony (Central Scientific Research Institute of Fire Prevention)

SUBMITTED: 27Mar63 ENCL: 00 SUB CODE: GC, OC

NO REF SOV: 003 OTHER: 001

Card 2/2

[illegible]

BARATOV, BORIS IVANOVICH.

Vozdushnyi flot S. S. S. R. i zadachi trudiashchiksia. S 7 risunkami v tekste. Moskva, Voenizdat, 1925. 38 p., illus.
Title tr.: The U. S. S. R. Air Fleet and the tasks of the workers.

TL526.R9B3

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955.

DEMIRKHANOV, R.A.; KURSANOV, Yu.V.; BARATOV, D.G.; KHARIN, G.V.

Resonance capture of electrons in a magnetic mirror machine with a space periodical helical magnetic field. Zhur. tekh. fiz. 39 no.1: 60-65 Ja '64. (MIRA 17:1)

DEMIRKHANOV, R.A.; KURSANOV, Yu.V.; BARATOV, D.G.; KHARIN, G.V.

Motion of electrons in a space-periodical helical magnetic field. Zhur. tekh. fiz. 33 no.9:1098-1103 S '63.
(MIRA 16:11)

AP4009921 S/0057/64/034/001/0060/0065

AUTHOR: Demirkhanov,R.A.; Kursanov,Yu.V.; Baratov,D.O.; Kharin,G.V.

TITLE: Resonance imprisonment of electrons in a magnetic mirror device with a spatially periodic helical magnetic field

SOURCE: Zhurnal tekhnicheskoy fiziki, v.34, no.1, 1964, 60-65

TOPIC TAGS: helical magnetic field, magnetic mirror, magnetic mirror trap, charged particle capture, particle imprisonment, helical magnetic field resonance, helical magnetic field trap

ABSTRACT: The equations of motion of an electron in combined longitudinal uniform and transverse helical magnetic fields are solved approximately for paraxial trajectories. It is found that at certain resonant values of the longitudinal electron velocity there is an interchange of longitudinal and transverse (Larmor) kinetic energy of the electron. The resonant velocities are those at which the apparent frequency of the magnetic field as seen from the moving electron is equal to the Larmor frequency, or to its second or third harmonic. Depending on the phase of the electron motion, either the transverse kinetic energy or the longitudinal

Card 1/3

AP4009921

kinetic energy may increase at the expense of the other. It is suggested that the resonant loss of longitudinal kinetic energy may make it possible for a particle to be imprisoned between two magnetic mirrors after having penetrated one of them. The theoretical conclusions were tested experimentally. A longitudinal magnetic field of 300 Oe or less was produced in a 9-cm diameter copper vacuum chamber by a solenoid 115 cm long. Magnetic mirrors with mirror ratios of up to 10 were located 150 cm apart. The transverse helical field was provided by three pairs of conductors carrying currents up to 700 amp. Each of these conductors was wound about the vacuum chamber in the form of a helix of 16-cm pitch. A 2-mm diameter 100-microamp beam of 0.75-keV electrons was injected at one end. The resonant loss of longitudinal kinetic energy was observed with the aid of a retarding field collector. The resonances at the fundamental and the second harmonic of the Larmor frequency were quite marked, about 40% of the electron energy being converted to transverse motion in a typical case. The energy conversion is more efficient when the electron beam is not too close to the axis, but the resonance conditions then become complex. This fact is illustrated with an experimental curve. To detect the capture of electrons between the magnetic mirrors, electron pulses of 3.5 microsec duration were injected and the decay of the current in the apparatus was observed with an oscilloscope. Two distinct half lives were usually observed: 1.5 microsec, including some 20% of

Card 2/3

AP4009921

the injected electrons, and 5 microsec, including 45% of the electrons. The current was still perceptible as long as 18 microsec after beam cut off. This portion of the current was due to electrons that had completed about 150 oscillations between the magnetic mirrors. Orig.art.has: 10 formulas and 7 figures.

ASSOCIATION: none

SUBMITTED: 03Nov62	DATE ACQ: 10Feb64	ENCL: 00
SUB CODE: PH	NR REF SOV: 002	OTHER: 003

Card 3/3

L 60327-65 EWT(1)/EPA(w)-2/EWA(m)-2 Pz-6/Pi-4 IJP(c) AT
ACCESSION NR: AP5018304 UR/0057/65/035/007/1250/1254 45
533.9 44
B

AUTHOR: Demirkhanov, R. A.; Kursanov, Yu. V.; Baratov, D. G.; Kharin, G. V.

21

TITLE: Investigation of the escape of electrons from a trap with a spatially periodic helical magnetic field

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 35, no. 7, 1965, 1250-1254

TOPIC TAGS: magnetic mirror, helical magnetic field, pulsed magnetic field, electron beam

ABSTRACT: The authors have investigated the influence of a pulsed magnetic field on the escape of electrons from a magnetic mirror system with a superimposed helical magnetic field. The magnetic mirror system was established in a 8 cm diameter, 2 m long glass cylinder evacuated to 2 x 10^{-4} N/m^2. The magnetic field strength in the uniform field region was between 2 x 10^3 and 2 x 10^4 A/m and the mirror ratio was between 5 and 7. The mirrors were 1.5 m apart. The helical field was produced by a 12 cm diameter, 16-cm pitch helical winding carrying 600 A. The pulsed field was produced by discharging a capacitor through a one-layer solenoid. This field was in the same direction as the

Card 1/3

L 60327-65

ACCESSION NR: AP5018304

/

magnetic mirror field; its amplitude was 3×10^3 A/m, its rise time was less than 2 microsec, and its decay time was varied from 10 to 500 microsec. A 1 mm diameter 50 microampere beam of 750 eV electrons was injected for 3.5 microsec parallel to the axis of the system and 1 cm from the axis. The delay between injection of the electrons and pulsing of the field was controlled. The electrons escaping from the magnetic mirror system at the end opposite the injector were collected and analyzed with a two-grid collector probe. Without the pulsed field the electrons escaped from the magnetic mirror system after a few tens of reflections. This rapid escape is ascribed to the reversibility of the resonance interaction of the particles with the helical field. The pulsed magnetic field increased the entrapment time to 25 microsec, corresponding to about 250 reflections. The escape of the electrons when the pulsed field was present appeared to be due to collisions with residual gas molecules. "The authors express their gratitude to I.P.Yamol'skiy for assistance in organizing the measurements." Orig. art has: 3 formulas and 8 figures.

Card 2/3

L 60327-65
ACCESSION NR: AP5018304

0

ASSOCIATION: none

SUBMITTED: 29Aug64 ENCL: 00 SUB CODE: EM

NR REF SOV: 002 OTHER: 002

Card 3/3 dap

POSTNIKOV, I.M.; KOSTENKO, D., redaktor; BARATOV, E., redaktor;
GOLOVCHENKO, G., tekhnicheskiy redaktor

[Designing electric machinery] Proektirovanie elektricheskikh mashin. Kiev, Gos. izd-vo tekhnicheskoi lit-ry USSR, 1952. 736 p. (MLRA 7:8)

(Electric machinery--Design and construction)

CHEKMAREV, A.P., laureat Stalinskoy premii; BARATOV, E., red.;
VOLKOVA, N., tekhn.nred.

[Precision rolling] Tochnaia prokatka. Kiev, Gostekhizdat
UkrSSR, 1952. 251 p. (MIRA 16:6)

1. Deystvitel'nyy chlen Akademii nauk UkrSSR (for Chekmarev).
(Rolling(Metalwork))

BARATOV E. I.

SHCHERBAN', Aleksandr Nazarovich; YAGEL'SKIY, Anatoliy Naumovich;
BARATOV, **Emil'** Iosifovich; ZIL'BAN, M.S., redaktor; KRYLOVSKAYA,
N.S., tekhnicheskiy redaktor.

[Simplified methods of making heat calculations for mine ventilation in Donets Basin coal mines] Uproshchennye sposoby teplovykh raschetov rudnichnogo vozdukha v shakhtakh Donbassa. Kiev, Izd-vo Akad. nauk USSR, 1954. 126 p. (MIRA 8:2)
(Mine ventilation)

[illegible]

BARATOV, E.I.

Effect of air velocity on the thermal regime of deep mines [with summaries in Russian and English]. Dop. AN URSR no.3:273-277 '57. (MLRA 10:9)

1. Institut girnichoi spravi Akademii nauk URSR.
(Mine ventilation)

БАРАТОВ Е И

AUTHOR: Baratov, E.I.(E.Y.) 21-5-20/26

TITLE: Thermal Regime in Deep Mines with Descending Ventilation (Teplovoy rezhim glubokikh shakht pri niskhodyashchem provetrivanii)

PERIODICAL: Dopovidi Akademii Nauk Ukrains'koi RSR, 1957, Nr 5, pp. 505-507 (USSR)

ABSTRACT: The change of the direction of ventilation current from ascending to descending is one of the methods of improving thermal conditions in deep mines. The author has carried out an analysis of thermal conditions for two cases: a mine with a coal seam sloping at 10° and another mine with a coal seam sloping at 60°. The geothermal gradient was assumed to be 35.2 m/grad. Comparing the two variants of ventilation, descending and ascending, with the use of formulas and monograms of the Institute of Mining, the author arrived at the result that the air temperature in the working face at a depth of 1,080 m is 2 to 2.5° C lower in the case of descending ventilation.

Card 1/2 The article contains 2 graphs, 1 table and 1 Slavic reference.

Thermal Regime in Deep Mines with Descending Ventilation 21-5-20/26

ASSOCIATION: Institute of Mining of the AN Ukrainian SSR (Instytut hirnychoi spravy AN URSR)

PRESENTED: By A.N.(O.N.) Shcherban', Member of the AN Ukrainian SSR

SUBMITTED: 11 March 1957

AVAILABLE: Library of Congress

Card 2/2

BARATOV, E. I., Cand Tech Sci -- (diss) "Ways of ~~decreasing~~ reducing the ~~air~~ [illegible] temperature ~~in the mines~~ without artificial cooling in Donbass pits of intermediate depth." Dnepropetrovsk, 1958. 15 pp (Min of Higher Education UkSSR, Dnepropetrovsk Order of Labor Red Banner Mining Inst im Artem), 100 copies (KL, 15-58, 115)

SHCHERBAN', Aleksandr Nazarovich, YAGEL'SKIY, Anatoliy Naumovich, BARATOV,
Emil' Iosifovich, KUCHEROV, P.S., otv.red.; ZIL'BAN, V...,red.;
SKLYAROVA, V.Ye. tekhn.red.

[Simplified methods for making thermal calculations for mine ventilation in Donets Basin mines] Uproshchennye sposoby teplovykh raschetov rudnichnogo vozdukha v shakhtakh Donbassa. Izd. 2., perer. i dop. Kiev, Izd-vo Akad.nauk USSR, 1958. 156 p. (MIRA 11:8)

1. Chlen-korrespondent AN USSR (for Kucherov)
(Donets Bassin--Mine ventilation)

SHCHERBAN', A.N., akademik; BARATOV, E.I., inzh.

Artificial air cooling in Donets Basin mines. Bezop.truda v prom. 2 no.10:3-5 O '58. (MIRA 11:11)

1. AN USSR (for Shcherban'). 2. Insitut gornogo dela AN USSR.
(Donets Basin--Mine ventilation)

SHCHERBAN', A.N., akademik; BARATOV, E.I., kand.tekhn.nauk; KREMNEV, O.A., kand.tekhn.nauk

Problems of temperature control in deep Donets Basin mines. Ugol' Ukr. 2 no.10:33-38 O '58. (MIRA 12:1)

1. Institut teploenergetiki AN USSR. 2. AN USSR (for Shcherban').
(Donets Basin--Coal mines and mining--Air conditioning)

SHCHERBAN', A.N. [Shcherban', O.N.], akademik; BARATOV, E.I.

Effect of extracted coal on the temperature of mine air at working faces [with summary in English]. Dop.AN URSR no.12: 1313-1315 '58. (MIRA 12:1)

1. AN USSR (for Shcherban'). 2. Institut teploenergetiki AN USSR.

(Coal mines and mining)

BARATOV, E.I., gornyy inzh.

Means of improving heat conditions in mines of varying depth. Izv. DGI 31:141-154 '58. (MIRA 11:7)
(Coal mines and mining--Air conditioning)

SHCHERBAN', A.N.; TSYRUL'NIKOV, A.S.; BARATOV, E.I.; RYZHENKO, I.A.;
AFONINA, G., red.; MATUSEVICH, S., tekhn.red.

[Determining the length of stopes in coal mines] Opredelenie dliny ochistnykh zaboev ugol'nykh shakht. Kiev, Gos.izd-vo tekhn.lit-ry USSR, 1959. 125 p. (MIRA 13:3)
(Mine ventilation) (Stoping (Mining))

11(7) SOV/21-59-7-13/[illegible]

AUTHOR: Shcherban', A.N. Member AS UkrSSR and Paratov, E.I.

TITLE: Method for Calculating the Length of the Coal Face by the Heat Factor

PERIODICAL: Dopovidi Akademii Nauk Ukrains'koi RSR, 1959, Nr 7, pp 753-755 (UkrSSR)

ABSTRACT: The authors propose a formula for determining the limiting length of the coal face by the heat factor. It is established that the limiting length of coal faces quickly decreases with an increase in the depth of mine workings. There are 8 mathematic formulas, 1 table and 4 Soviet references.

ASSOCIATION: Institut teploenergetiki AN UkrSSR (Institute of Heat-power Engineering AS UkrSSR)

SUBMITTED: February 18, 1959

Card 1/1

SHCHERBAN', A.N., akademik; BARATOV, E.I., kand.tekhn.nauk

Determining the maximum length of a stope according to the thermal factor. Ugol' Ukr. 3 no.9:9-11 S '59. (MIRA 13:2)

1. Institut teploenergetiki AN USSR. 2. AN USSR (for Shcherban').

(Coal mines and mining--Safety measures)
(Mine ventilation)

BARATOV, E.I., kand.tekhn.nauk; MATS'KOVSKAYA, A.G., inzh.

Comments on V.I.Belov and B.I.Medvedev's article "Air temperature in longwalls as a factor limiting the length of longwalls." Bezop.truda v prom. 3 no.10:25-26 O '59. (MIRA 13:2)

1. Institut teploenergetiki AN USSR.
(Coal mines and mining) (Belov, V.I.)
(Medvedev, B.I.)

SHCHERBAN', A.N. [Shcherban', O.N.], akademik; BARATOV, E.I.

Effect of roof control method on thermal conditions in deep Donets Basin mines. Dop.AN URSR no.2:177-180 '60. (MIRA 13:6)

1. Institut teploenergetiki AN USSR. 2. AN USSR (for Shcherban').
(Mine sanitation)

DUGANOV, G.V., kand.tekhn.anuk; BARATOV, E.I., kand.tekhn.nauk; KUKHAREV, V.N., inzh.

Research on heat conditions in Krivoy Rog mines during the extension of mining operations to low levels. Izv. vys.ucheb.zav.; gor. zhur. no.5:34-41 1960. (MIRA 14:3)

1. Dneproptrovskiy ordena Trudovogo Krasnogo Znameni gornyy institut imeni Artema. Rekomendovana kafedroy rudnichnoy ventilyatsii.

(Krivoy Rog--Mine ventilation)

BARATOV, E.I., kand.tekhn.nauk

Effect of the parameters of overburden removal, development, and the systems of mining on the heat conditions in deep mines. Trudy Sem.po gor.teplotekh. no.3:33-39 '61. (MIRA 15:4)

1. Institut teploenergetiki AN USSR.
(Donets Basin--Mine ventilation)

BARATOV, E.I.; MALASHENKO, E.N.

Method for calculating mine air temperature in coal pump rooms of hydraulic mines. Dop.AN URSR no.4:501-503 '61. (MIRA 14:6)

1. Institut teploenergetiki AN USSR. Predstavleno akademikom AN USSR A.N. Shcherbanem.

(Mine ventilation)

BARATOV, E.I.; MALASHENKO, E.N. [Malashenko, E.M.]

Method of determining the temperature increment of a hydraulic monitor jet during the impact on an immobile barrier. Dop. AN URSR no.11:1485-1487 '61.

(MIRA 16:7)

1. Institut teploenergetiki AN UkrSSR.

(Hydraulic mining)

DUGANOV, G.V., **kand.tekhn.**nauk; BARATOV, E.I., kand.tekhn.nauk

Geothermal conditions of the Krivoy Rog Basin. Gor. zhur. no.12:54 D '61. (MIRA 15:2)

1. Dnepropetrovskiy gornyy institut (for Duganov). 2. Institut teploenergetiki AN USSR (for Baratov).

(Krivoy Rog Basin--Earth temperature)

BARATOV, E.I.; CHERNYAK, V.P.

Improving the temperature conditions in lavas of deep mines by heat draining. Zbir. prats' Inst. tepl. AN URSR no.22: 29-33 '61. (MIRA 16:6)

(Mine ventilation)

SHCHERVAN', A.N., akademik; BARATOV, E.I., kand.tekhn.nauk; RYZHENKO, I.A., gornyy inzh.

Temperature and gas-and-dust conditions in the downcast ventilation of stopes. Ugol' Ukr. 5 no.1:17-19 Ja '61. (MIRA 14:1)

1. AN USSR (for Shchervan').

(Donets Basin—Mine ventilation)

DUGANOV, G.V., dotsent; KUKHAREV, V.N., gornyy inzhener; BARATOV, B.I.,
kand.tekhn.nauk

Ways of improving the air condition in the mines of Donets Basin Kadievka District. Ugol' Ukr. 5 no.10:24-26 O '61. (MIRA 14:12)

1. Dnepropetrovskiy gornyy institut (for Duganov, Kukharev).
2. Institut teploenergetiki AN USSR (for Baratov).
(Donets Basin--Mine ventilation)

LUGOVSKIY, Sergey Ivanovich; DUGANOV, G.V.; BARATOV, E.I.; BAKIROV,
U. Kh.; CHERNOUS, A.P.; KLEBANOV, F.S., otv. red.;
SMIRENSKIY, M.M., red.izd-va; SHKLYAR, S.Ya., tekhn. red.

[Ventilating deep mines]Provetrivanie glubokikh rudnikov.
Moskva, Gosgortekhizdat, 1962. 322 p. (MIRA 15:11)
(Mine ventilation)

BARATOV, E.I., kand.tekhn.nauk; TERESHCHENKO, V.G., inzh.

Temperature conditions in a section in connection with different orders of mining in the mine area. Ugol'.prom. no.1:89-90 Ja-F '62. (MIRA 15:8)

1. Institut teploenergetiki AN UkrSSR.
(Coal mines and mining) (Mine ventilation)

BARATOV, E.I., kand.tekhn.nauk; CHERNYAK, V.P., inzh.

"Heating of mine shafts" by M.M. Shemakhanov. Reviewed by E.I. Baratov, V.P. Cherniak. Ugol' Ukr. 6 no.1:44 Ja '62. (MIRA 15:2)

(Mining engineering)
(Shemakhanov, M.M.)

BARATOV, E.I., kand.tekhn.nauk; MALASHENKO, E.N., inzh.

Predicting and regulating the heat conditions in hydraulic mines. Trudy Sem.po gor.teplotekh. no.4:16-20 '62. (MIRA 15:8)

1. Institut teploenergetiki AN UkrSSR.
(Hydraulic mining) (Mine ventilation)

BARATOV, E.I.; TERESHCHENKO, V.G. [Tereshchenko, V.H.]

Analysis of existing methods for determining the length of the longwall taking into account the thermal factor. Zbir. prats' Inst. tepl. AN URSR no.24:41-48 '62. (MIRA 16:3)

(Mining engineering)

BARATOV, E.I.; TERESHCHENKO, V.G. [Tereshchenko, V.H.]

Choice of physical heat constants in calculating heat of mine methane in stopes. Zbir. prats' Inst. tepl. AN URSR no.24:49-52 '62. (MIRA 16:3)

(Mining engineering) (Stoping (Mining))

BARATOV, E.I., kand.tekhn.nauk; TERESHCHENKO, V.G., inzh.

Experimental studies of the creating of cooled zones in mine workings. Trudy Sem.po gor.teplotekh. no.4:66-71 '62.
(MIRA 15:8)

1. Institut teploenergetiki AN UkrSSR.
(Mine ventilation)

BARATOV, E.I., kand.tekhn.nauk; CHERNYAK, V.P., inzh.; CHIZHOV, B.D.,
kand.tekhn.nauk

Determining the rated parameters of outside air for purposes of predicting and regulating the heat conditions of mines located in areas with an extreme continental climate. Trudy Sem.po gor.teplotekh. no.4:72-74 '62. (MIRA 15:8)

1. Institut teploenergetiki AN UkrSSR.
(Mine ventilation)

BARATOV, E.I., kand.tekhn.nauk; FURMAN, N.I., kand.tekhn.nauk

Bore-hole thermometer for mines. Ugol'.prom. no.4:78-79
Jl-Ag '62. (MIRA 15:8)

1. Institut teploenergetiki AN UkrSSR.
(Thermometers)

BARATOV, E.I., kand.tekhn.nauk; CHERNYAK, V.P., inzh.

Regulation of the heat conditions in mines located in permafrost areas. Trudy Sem.po gor.teplotekh. no.4:94-100 '62.
(MIRA 15:8)

1. Institut teploenergetiki AN UkrSSR.
(Mine ventilation--Cold weather conditions)
(Frozen ground)

BARATOV, E.I., kand.tekhn.nauk; CHERNYAK, V.P., inzh.

Regulating the heat conditions in mines located in areas with an extreme continental climate. Trudy Sem.po gor.teplotekh. no.4:101-105 '62. (MIRA 15:8)

1. Institut teploenergetiki AN UkrSSR.
(Mine ventilation)

DUGANOV, G.V., kand.tekhn.nauk; KUKHAREV, V.N., inzh.; BARATOV, E.I.,
kand.tekhn.nauk

General study of the heat conditions of mines in the Kadiyevka region of the Donets Basin. Trudy Sem.po gor.teplotekh. no.4: 155-161 '62. (MIRA 15:8)

1. Dnepropetrovskiy gornyy institut im. Artema.
(Donets Basin--Mine ventilation)

BARATOV, E.I., kand.tekhn.nauk; TERESHCHENKO, V.G., gornyy inzh.

Effect of the depth of cut on the temperature conditions in the stopes. Ugol' Ukr. 6 no.8:19-20 Ag '62. (MIRA 15:11)
(Stoping)
(Mine ventilation)

DUGANOV, Georgiy Vasil'yevich, doktor tekhn. nauk; BARATOV, Emil' Iosifovich, kand. tekhn. nauk; Prinimal uchastiye KUKHAREV, V.N.; NIKITIN, V.S., otv. red.; LUCHKO, V.S., red.izd-va; IL'INSKAYA, G.M., tekhn. red.

[Heat regime of mines]Teplovoi rezhim rudnikov. Moskva, Gosgortekhizdat, 1963. 143 p. (MIRA 16:4)
(Mine ventilation)

KLEBANOV, F.S., kand. tekhn. nauk; ROSSOCHINSKIY, V.I., inzh.; MYASNIKOV, A.A., kand. tekhn.nauk; BARATOV, E.I., kand. tekhn.nauk; MALASHENKO, E.N., inzh.; KOREPANOV, K.A., kand. tekhn. nauk; SKLYAROV, A.A., kand. tekhn. nauk; SYROYEZHKIN, P.V., inzh.; KUKHARSKIY, M.P., inzh.; VORONINA, L.D., otv. red.; BERKGAUT, V.G., red.izd-va; DOROKHINA, I.N., tekhn. red.

[Improving mine ventilation methods in hydraulic mining] Sovershenstvovanie sposobov proveterivaniia vyrabotok gidroshakht. [By] F.S.Klebanov i dr. Moskva, Izd-vo AN SSSR, 1963. 156 p. (MIRA 16:10)
(Mine ventilation) (Hydraulic mining)

DUGANOV, G.V., doktor tekhn.nauk; BARATOV, E.I., kand.tekhn.nauk

Geothermy of the Krivoy Rog Basin. Izv.vys ucheb.zav.:gor.zhur.
7 no. 1:7-12 '64. (MIRA 17:5)

1. Dnepropetrovskiy ordena Trudovogo Krasnogo Znameni gornyy institut imeni Artema (for Duganov). 2. Institut teploenergetiki AN UkrSSSR (for Baratov). Rekomendovana kafedroy rudnichnoy ventilyatsii Dnepropetrovskogo ordena Trudovogo Krasnogo Znameni gornogo instituta imeni Artema.

SHCHERBAN', A.N., akademik; BARATOV, F.I., kand. tekhn. nauk; CHERNYAK, V.P., kand. tekhn. nauk

System of mine air cooling with the use of cased holes. Met. i gornorud. prom. no.6:53-54 N-D '65.

(MIRA 18:12)

1. AN UkrSSR (for Shcherban').

BARATOV, E.I., kand.tekhn.nauk (Kiyev); CHERNYAK, V.P., kand.
tekhn.nauk (Kiyev)

Calculation of the effectiveness of evaporative cooling of the control cabs of hoisting-conveying and earthmoving machines. Vod.i san.tekh. no.12:10-12 D '65.

(MIRA 19:1)

L 30350-66

ACC NR: AP6014733 (A) SOURCE CODE: UR/0327/65/000/012/0010/0012

AUTHORS: Baratov, E. I. (Candidate of technical sciences)(Kiev); Chernyak, V. P. 4/9
(Candidate of technical sciences)(Kiev)

B

ORG: none

TITLE: Calculation of the efficiency of air conditioning in the control cabins of hoist-transport and excavation machines

SOURCE: Vodosnabzheniye i sanitarnaya tekhnika, no. 12, 1965, 10-12

TOPIC TAGS: EXCAVATING MACHINERY ~~cabin environment,~~ air conditioning equipment, crane, heat transfer, heat balance, ventilation engineering, temperature / ERG-350/1000 EXCAVATING MACHINERY

24 10

ABSTRACT: Equations are derived for determining the temperature of the air leaving the interwall space and the temperature of the air leaving the cabin when air conditioning is used. The sequence for making heat calculations for air cooling is given. A practical calculation is made for cooling of the cabin of the ERG-350/1000 rotary excavator. The results of the calculations show that air cooling with thermal humidity treatment of the cabin air by means of a sprinkling chamber, when the temperature of the external air is 30--40C, ensures a cabin air temperature of 21--27.2C with a relative humidity of 0.7--0.75. At temperatures above 40C, dry conditioners should be used in conjunction with air cooling of the enclosures.

Card 1/2

UDC: 697.911

L 30350-66

ACC NR: AP6014733

Orig. art. has: 6 formulas, 1 table, and 2 figures.

SUB CODE: 13/ SUBM DATE: none ORIG REF: 003

Card 2/2

ACC NR: AP7005116 SOURCE CODE: UR/0021/66/000/009/1157/1161

AUTHOR: Baratov, E. Y.; Galitsyn, A. S.; Shcherban', O. N. (Academician AN UkrSSR)

ORG: (Institute of Engineering Heat Physics, AN UkrSSR (Instytut tekhnichnoyi teplofizyky AN UkrSSR)

TITLE: Geotemperature field during mine ventilation in regions with an acutely continental climate

SOURCE: AN UkrRSR. Dopovidi, no. 9, 1966, 1157-1161

TOPIC TAGS: Laplace transform, heat conductivity

ABSTRACT: The authors present an approximate analytical solution of equations of non-stationary thermal conductivity

$$\frac{\partial U}{\partial \tau} = a\left(\frac{\partial^2 U}{\partial r^2} + \frac{1}{r}\frac{\partial U}{\partial r}\right), \quad (\tau > 0,\ R_0 < r < \infty);$$

$$U = U_0, \quad \tau = 0;$$

$$\lim_{r\to\infty} U = U_0, \quad \tau > 0,$$

with the boundary condition

Card 1/2

0926 1640

ACC NR: AP7005116

$$\frac{\partial U}{\partial r} - \frac{\alpha}{\lambda}[U - U^*(\tau)] = 0, \quad r = R_0;$$

$$U^*(\tau) = \begin{cases} U_1, & k\tau_2 < \tau < k\tau_2 + \tau_1 \\ U_2, & k\tau_2 + \tau_1 < \tau < (k+1)\tau_2 \end{cases} \quad (k = 0, 1, \ldots)$$

$$(U_0 = \text{const}, U_1 = \text{const}, U_2 = \text{const}; U_1 > U_2),$$

by means of the Laplace transform.

The authors also give an expression for determining the coefficient of non-stationary heat-exchange. Orig. art. has: 1 figure and 24 formulas. [JPRS: 38,695]

SUB CODE: 20,12 / SUBM DATE: 28Sep65 / ORIG REF: 003

Card 2/2

BARATOV, G.

Competition with the Moscow financial organs. Fin. SSSR 16 no.1: 44-46 Ja '55.
(MIRA 7:12)

1. Zaveduyushchiy Kiyevskim gorfinotdelom.
(Kiev--Finance)

BARATOV, G.

Work without arrears. Fin.SSSR 16 no.11:77-79 N '55. (MLRA 9:1)
(Kiev--Tax collection)

BARATOV, G.

Relying on the activist group. Fin. SSSR 18 no.5:92-93 My '57.
(MLRA 10:6)

1. Zaveduyushchiy Kiyevskim gorodskim finansovym otdelom.
(Kiev--Tax collection)

BARATOV, G.

Fulfilling promises to constituents. Fin. SSSR 20 no.5:53-55 My '59.
(MIRA 12:10)

1.Zaveduyushchiy Kiyevskim gorfinotdelom.
(Kiev--Budget)

BARATOV, G.

Searching for new potentials. Fin. SSSR 22 no.7: 58-60 Jl '61.
(MIRA 14:7)

1. Zaveduyushchiy Kiyevskim gorodskim finansovym otdelom.
(Kiev--Finance)

BARATOV, G.

Subject the utilization of incentive funds to strict control.
Fin. SSSR 22 no.11:35-39 N '61. (MIRA 14:11)

1. Zaveduyushchiy Kiyevskim gorodskim finansovym otdelom.
(Kiev--Industrial management) (Kiev--Finance)

BARATOV, G.

For a more profound analysis of economic operations. Fin. SSSR 23 no.7:63-67 Jl '62. (MIRA 15:7)

1. Zaveduyushchiy Kiyevskim gorodskim finansovym otdelom.
(Kiev--Auditing and inspection)

BARATOV, G.

Our main task. Fin. SSSR 37 no.5:57-58 My '63. (MIRA 16:5)

1. Zaveduyushchiy Kiyevskim gorodskim finansovym otdelom.
(Kiev—Industrial management)

BARATOV, GEORGIY FEDOROVICH

Local Anti-Air Defense of the Population Under Conditions of Chemical, Atomic, and Bacteriological Attack, USSR. New York, USJPRS, 1960.
279 p. Illus. (JPRS: 3726)
Translated from the original Russian: Mestnaya Protivovozdushnaya Oborona Naseleniya v Usloviyakh Khimicheskogo, Atomnogo I Bakteriologiheskogo Napadeniya, Kiev, 1959.

BARATOV, Georgiy Fedorovich; SHMUSHKO, L.G., obshchiy red.; POLTAVETS, I.M., red.; POTOTSKAYA, L.A., tekhn.red.

[Local civil antiaircraft defense during a gas, nuclear, and bacteriological attack] Mestnaia protivovozdushnaia oborona naseleniia v usloviiakh khimicheskogo, atomnogo i bakteriologicheskogo napadeniia. Pod obshchei red. L.G.Shmushko. Kiev, Gos.med.izd-vo USSR, 1959. 300 p. (MIRA 12:12)

(Civil defenses)

L 10345-63 EWA(b)/EPF(n)-2/EWT(m)/BDS/ES(b) AFFTC/ASD/APGC/AFWL/
SSD Pa-4/Pu-4 AR/K

PHASE I BOOK EXPLOITATION SOV/6370

Baratov, Georgiy Fedorovich

74
69

Zashchita naseleniya v usloviyakh primeneniya atomnogo, khimicheskogo i bakteriologicheskogo oruzhiya (Protection of the Population From Nuclear, Chemical, and Bacteriological Weapons). Kiyev, Medgiz USSR, 1962. 423 p. 50,000 copies printed.

Ed. (Title page): I. P. Sokolenko; Ed.: F. S. Talan; Tech. Ed.: V. D. Chuchupak.

PURPOSE: The book is intended as a teaching aid for those studying the problems of protecting populations from mass-destruction weapons. Intended primarily for use in educational institutions, it may also be useful to persons handling radioactive substances or working with sources of ionizing radiation.

COVERAGE: The book gives basic information concerning various means of aerial attack and the principles of construction and operation of the different kinds of atomic, chemical, and bacteriological

Card 1/5

L 10345-63

Protection of the Population (Cont.) SOV/6370 5

weapons, supplemented by information on safety and shielding measures to be observed by those handling radioactive substances or working with sources of ionizing radiation. Special attention is given to first-aid techniques and to the therapeutic and prophylactic measures to be taken at destruction sites: quarantine, observation, sanitary personnel processing, decontamination, delousing, and vermin control. Modern means of protecting populations from injury by nuclear, thermonuclear, chemical, and bacteriological weapons are described in detail. Also, techniques for individual protection, personal hygiene, and radiometric and dosimetric control during work with radioactive substances and ionizing radiation sources are discussed. The author thanks S. A. Potapov, I. D. Bukhanchuk, G. I. Gavrilov, V. N. Shcheglov, and A. A. Pochechun for valuable comments and advice. A few scattered references are given in the form of footnotes.

TABLE OF CONTENTS [Abridged]:

Foreword 3

Card 2/5

L 10345-63

Protection of the Population (Cont.) SOV/6370 0

Introduction 5

Ch. I. Modern Weapons for Aerial Attack and Destruction From the Air 10
- Means of attack 10
- Means of destruction 32

Ch. II. Protecting the Populace From Modern Aerial Attack 143
- Antiaircraft defenses 144
- Organization and procedures of civil defense 148
- General information on protective measures 158

Ch. III. Minimizing the Consequences of Aerial Attack 238
- Emergency rescue operations at destruction sites 239

Ch. IV. First-Aid Measures at Destruction Sites 260
- Basic principles of first aid 260

Ch. V. Gas and Radioactivity Decontamination 276
- Destruction-site reconnaissance 276

Card 3/5

L 10345-63

Protection of the Population (Cont.)

SOV/6370

0

Identification of poisonous substances (Chemical-reconnaissance devices) 279

Operating procedures for chemical reconnaissance 285

Determination of radioactive damage to a site 288

Dosimetric instruments 288

Ch. VI. General Information on Civil Defense Against Bacteriological Attack 339

Procedures to be followed on the outbreak of infectious diseases 342

Bacteriological reconnaissance 347

Measures for minimizing the consequences of bacteriological attack 348

Ch. VII. How to Organize Civil Defense Against Atomic, Chemical, and Bacteriological Weapons 370

Card 4/5

L 10345-63

Protection of the Population (Cont.) SOV/6370

Ch. VIII. Measures for Protection Against Ionizing Radiation During Work With Radioactive Substances 378
General information 379
Basic concepts, definitions, and terminology 407
Checklist for civilians on what to do in response to civil defense signals 411
[Tables of equipment for various installations, teams, etc.] 415

AVAILABLE: Library of Congress

SUBJECT: Civil Defense

bm/ch

Card 5/5

IS/olb/jk
7/10/63

B
BARATOV, K.Z.

Study of diet among collective farmers of the Vakhsh Valley. Zdrav. Tadzh. 3 no.2:16-19 Mr-Ap '56 (MIRA 12:7)

1. Iz otdela gigiyeny (i.o. zav.- K.Z. Baratov) Stalinabadskogo instituta epidemiologii i gigiyeny Ministerstva zdravookhraneniya Tadzhikskoy SSR (dir. - dotsent M.Ya. Rasulov).
(VAKSH VALLEY--DIET)

BARATOV, K. B., Cand of Med Sci -- (diss) "Experience of compiling a sanitary description of an agricultural region of Tadzhikistan." Alma-Ata, 1957, 19 pp (Kazakh State Medical Institute im V. M. Molotov), 300 copies (KL, 37-57, 104)